however, on our approach. It is of little avail to pound on the gates of industry shouting advice which comes from strangers who have little knowledge of industry's problems. To industry, production is of first concern and health is often secondary. When they do consider health, it is health as a whole, not as tuberculosis, venereal disease, or malnutrition. Most often their first health concern is with safety or with specific hazards arising from their processes, such as lead poisoning, silicosis, dermatitis.

The health problems of industry, including tuberculosis, are all covered in the rather highly specialized field of industrial hygiene, which is the application of public health methods to industry. The California State Department of Health has a well organized and efficiently operated Industrial Hygiene Service. It is well equipped and staffed with experts in medicine, chemistry, and engineering. It works closely with the Industrial Accident Commission and the Workmen's Compensation Board. It is being well received by industry throughout the State, has ready entree to industrial councils. In addition, several county and city health departments have well organized bureaus of industrial hygiene which work closely with the State. Unless some unusual opportunity occurs, it is usually better to approach industry through these official agencies, rather than to make a separate approach concerning tuberculosis alone. Industrial hygienists are as much concerned with the control of tuberculosis in industry as we are and will often welcome the facilities available through the local tuberculosis association.

### SUMMARY

To summarize, war and tuberculosis go hand in hand. We are better prepared than ever before to attempt control of tuberculosis in this war. To do so will require increased effort and continued financial support. If victory requires such extreme sacrifices as large destruction of food supplies, homes and the value of the "real wage," and if it requires serious curtailment of adequate health facilities for civilians, then a great increase in tuberculosis is inevitable. Assuming that such extreme sacrifices can be avoided, then war tuberculosis can be largely controlled. One of our most important fields of endeavor must be in industry where many of the conditions originate which contribute to the rise of wartime tuberculosis.

The x-ray is one of the most important weapons this country has for civil defense.

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"The battle against tuberculosis is not a doctor's affair, it belongs to the entire public," said the famous Sir William Osler.

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One of the greatest achievements of the 20th century can be the eradication of tuberculosis in the United States.

## ADMINISTRATION OF CASE FINDING IN INDUSTRY\*

E. P. Von Allmen
Oakland

F ALL the newly-reported cases of re-infection type tuberculosis in Alameda County last year, 89 per cent were over 20 years of age.

Since most of the people over the age of 20 will be found at work, it is important to tuberculosis control to try to find the people in the adult population who have tuberculosis and place them under treatment.

In the summer of 1939, it was decided by the Alameda County Tuberculosis Association to offer fluoroscopic chest examinations to people employed in industry. Our surveys to discover the proper place to begin were made of 24 adult groups, ranging in size from 100 to 1000 employees.

That suggests the way to start such a program is by choosing the logical groups. A part-time plant physician may be interested in a survey, if approached by the proper person. Or, the opportunity to serve may result from a letter in plain English to the key person in the firm, describing the *free* service which tuberculosis associations can offer.

Your health department can be asked to work with you. The Department can suggest plants in which it would be a good idea to have such service offered.

Put the personnel officer of your local industrial firms and the industrial nurse on your mailing list for your monthly news bulletin, so that they will know what you are doing.

Eventually the news will get around that your Association provides this service and requests will come to you. From here on it is a coöperative effort between your association and the industry.

The routine work has been carefully worked out and from this experience other associations may be helped in making plans for such a project.

#### PROCEDURE USED

In fluoroscopic surveys equipment is moved to the plant; a room is darkened for the survey and employees are routed in small groups to this room for examination.

#### RESULTS AND COSTS

In the recent fluoroscopic screening of 5,611 adult persons, 120 were considered for further study.

Of this number, 76 persons, or 1.4 per cent, required medical treatment for tuberculosis or other pathology found; and 27 of these persons had active pulmonary tuberculosis.

<sup>\*</sup> Read before the California Tuberculosis Association, Los Angeles, April 10, 1942.

From the Alameda County Tuberculosis Association.
Copy of complete paper may be secured from California Tuberculosis Association.

Sixty-four, or 84 per cent of the 76 persons with pathology were referred to 36 different private physicians and 12 persons, or 16 per cent to clinics.

The total cost of the 5,611 examinations was \$2368.18, or 42 cents per person.

The cost of discovering each of the 76 persons needing medical attention was \$31.16; the cost of finding each case of active tuberculosis was \$87.71.

#### REPORTS TO EMPLOYEES AND EMPLOYERS

Considerable care needs to be taken with regard to reports on these examinations. These are regarded as confidential and only the employee concerned is given the findings on his own examination.

This is usually the understanding with the employer at the start. If the employee has tuberculosis and refuses treatment, the matter is then in the hands of the City Health Department for adjustment.

# THE PROBLEMS OF TUBERCULOSIS ARE SOCIAL AS WELL AS MEDICAL \*

WILTON L. HALVERSON, M.D.

Los Angeles

S UPPORTED with the findings revealed through a study conducted in Los Angeles County, we have tried to demonstrate the need for medical social case work in the care of tuberculous patients.

The problems which face the tuberculous patient are social as well as medical. Tuberculosis implies long term medical care and disability, total or partial. Chronic illness affects a patient psychologically. It changes his financial and social circumstances. The news itself is frightening. More often than not he needs aid in removing obstacles that stand in the way of his accepting the doctor's recommendations for treatment. Too often he rationalizes to the effect that perhaps he does not have tuberculosis, and seeks verification of his wishful thinking through some other doctor, not always a doctor of medicine. Or, he decides he is not really sick enough to inconvenience his family economically as yet, and drags on.

If these people are worthy of the expense of diagnosis and appropriate medical care, involving long-term sanatorium care, they are also worth the expense of proper social care. This should include a consultation service and guidance if the patient wishes, from a well-trained medical social worker. If this is offered at the time the medical diagnosis is made, it will help to adjust difficult social situations during the waiting period for sanatorium care, and is likely to bring

Abstract.

him to the sanatorium in a more hopeful mental attitude. Social care should run concurrently with medical care.

In the Los Angeles County Health Department, we have had since 1927 a small staff of medical social case workers for the purpose of helping patients with other problems arising out of their need for medical care. It is department policy to offer each patient the opportunity of an interview with a trained medical social case worker, at the time of a positive diagnosis for either tuberculosis or venereal disease.

The aim of the medical social worker in this first interview with the patient is to find out how the patient has accepted the diagnosis; what it will mean to himself and his family; whether he understands the examining physician's recommendations; whether he expects to carry through on the recommendations; whether he wishes help in developing a plan of care; whether care can be arranged through private medical practice, or whether it need be arranged through other community resources or through the services of the County Health Department. This application of medical social work skills at the point of medical diagnosis and recommendations for care, when the patient is faced with the reality of the problems created by the discovery of a potentially disabling communicable disease, is of value to the patient. It is equally as important to the administration of the public health program and to the future medical economics of the community which eventually pays the bill for the neglected chronic, disabling diseases.

Recently, the Los Angeles County Health Department completed a study of 162 patients who had a positive sputum as of June 30, 1940 and were residing at home. The objective was to understand why these patients were not under institutional care. Of the 162, about 83 per cent (134) were eligible under the provisions of the California Welfare and Institutions Code for county institutional care. Of the total, 24 or about 15 per cent had been recommended for, and were awaiting sanatorium placement; 138, or about 85 per cent, were not being recommended for institutional care. An analysis of the "reasons" why placement was not recommended by the attending physician at this time showed the following:

Pa	atients	Percentage
Available care at home considered satisfactory from a medical stand-		
point	78	56.6
Patient unwilling to leave family		
group	18	13.1
Ex-sanatorium patient, unable to adjust to institutional care	12	8.6
Patient fears recommended surgery and medical care for which he was referred to sanatorium	18	13.1
Patient unwilling to comply with the provisions of the California Welfare and Institutions Code	4	2.8
Patient unwilling to accept diagnosis of tuberculosis	6	4.4
Patient feels there is racial discrim-		
ination at the County Sanatorium	1	0.7
Reason not given	1	0.7
Total	138	100%

<sup>\*</sup>Read before the California Tuberculosis Association, Los Angeles, April 10, 1942.

Health Officer, Los Angeles County.

Copy of complete paper may be secured from California Tuberculosis Association.